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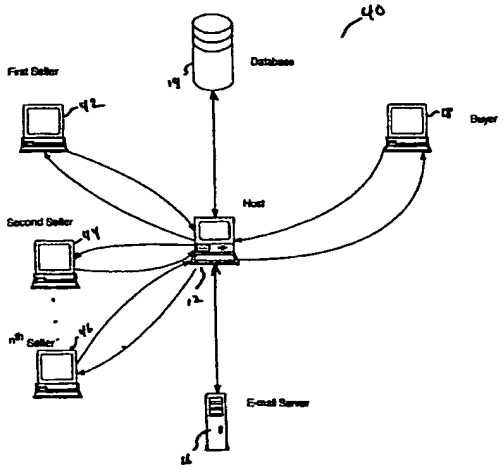
(54) Title: ON-LINE REVERSE AUCTION SYSTEM AND METHOD



(57) Abstract: The present invention includes a system (10) for operating a reverse auction on a communications network. The system (10) includes a host server (12) that hosts a web site and electronically communicates with the network. The system (10) has an open back end that is accessible by multiple sellers. The system (10) displays offers to buy and enables sellers to post offer-responses in response to the offers to buy. The offers to buy and the offer-responses are published to the network to facilitate open competition between sellers. The system (10) includes features that preserve user anonymity, namely the provision of an email server (16) that anonymously forwards email between buyers and sellers. The system (10) also includes a negotiation room server (72) having on-line chat capability to enable anonymous posting of queries and query responses to the web site.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

ON-LINE REVERSE AUTION SYSTEM AND METHOD

Field:

The present invention pertains to on-line auctions, and more particularly, the present invention pertains to reverse auctions where buyers post offers to buy and sellers compete for the buyers' business.

Background:

Respond.com, Inc. operates an on-line reverse transaction system on the Internet. This system receives offers to buy items from buyers. The system forwards the offer to a pool of sellers. The sellers generate offer-responses and use the system to contact the buyer with the offer-responses. Contact between the sellers and a buyer is initially accomplished through the system. This reverse transaction format enables buyers to sift through the seller responses and choose the most appropriate seller.

One drawback of the Respond.com, Inc. system is that the back end of the system is closed. Sellers are normally not aware of what other sellers are presenting to the buyers. Competition between sellers is reduced. What is desired is a way of increasing competition between sellers to provide buyers with an optimal forum for buying goods and services.

SUMMARY OF THE INVENTION

The present invention includes a system for operating a reverse auction on a communications network. The system includes an open back end that displays offers and offer-responses to all users. The system also includes features that preserve buyer anonymity. These features include anonymous on-line chat and anonymous e-mail forwarding.

The system operates on a communications network accessible by buyers and sellers, such as the Internet. A host server communicates with communications network via a web site for posting offers to buy items and for posting offer-responses to the communications network. The host server includes a buyer interface accessible by buyers for receiving offers to buy items. The host server receives offers to buy items via the buyer interface and posts the offers to buy items to the network.

The host server includes a seller interface accessible by sellers. The seller interface receives offer-responses. The offer-responses are responsive to the offers to buy items. The host server posts the offer-responses to the network to enable competitive bidding between sellers.

The system includes a user database stored on the host server to store user contact information and an e-mail server. The user contact information includes a user e-mail address associated with each user.

The e-mail server communicates with the users, the host server and the user database. The e-mail server receives queries from buyers and anonymously forwards the queries to sellers. Query-responses from the sellers are received and forwarded to the buyer. The system preserves buyer anonymity by keeping buyer's contact information confidential.

Brief Description of the Drawing:

FIG. 1 is a diagram of a system in accordance with the present invention.

FIG. 2 is a flow diagram showing a method employed by the system of FIG. 1.

FIG. 3 is a diagram of the system of FIG. 1 having multiple sellers.

FIG. 4 is a flow diagram of a reverse auction method employed by the system of FIG. 3.

FIG. 4(a) is a sample listing form for enabling a buyer to communicate an offer to buy.

FIG. 5 is a diagram of the system of FIG. 1 with a negotiation room server to facilitate chat between a buyer and a seller.

FIG. 6 is a flow diagram of a method of employing the system of FIG. 5.

DETAILED DESCRIPTION

FIG. 1 shows a system in accordance with the present invention, generally designated with the reference numeral 10. The system 10 includes a host server, a database 14, an e-mail server 16, a buyer 18 and a seller 20. The system 10 may be employed to preserve buyer anonymity in online transactions such as reverse transactions,

online auctions and reverse online auctions.

The term "item" is understood to include goods and services. The term "buyer(s)" is defined as including prospective buyers. The tern "seller(s)" is defined as including prospective sellers. Buyers 18 and sellers 20 deal in items.

The system 10 is particularly useful for reverse transactions and reverse auctions. A reverse transaction as defined herein is a transaction, which is initiated by a buyer in the form of an offer to buy an item. This offer to buy is directed to the general public, or to a predefined group of sellers.

For the purposes of the present invention, seller responses to the buyer's offer to buy are termed "offer-responses". Each offer and each offer-response is published to the general public, or to a predefined group such as a group of registered system 10 users.

A reverse auction is a reverse transaction where sellers are enabled to publicly respond to a buyer's offer to buy. According to reverse auction principals, posted offer-response typically includes a price term that is displayed publicly. The price term is normally modifiable by the seller 20. Since the offer-responses are posted, a seller 20 may view other seller's offer-responses and formulate an offer-response, or modify an existing offer-response that is priced competitively with other seller's offer-responses. Reverse auctions facilitate competition between sellers 20 and thereby provide the buyer 18 with favorable transaction opportunities.

The system 10 electronically communicates with the communications network 22. The communications network 22 enables access by numerous buyers 18 and sellers 20. Preferably, the communications network 22 is the Internet. According to an alternate aspect of the invention, the communications network 22 is a closed network such as an intranet. It can be appreciated that any communication network capable of communicating text, voice and/or images can be used in accordance with the present invention.

The host server 12 electronically communicates with the communications network. The host server 12 receives offers to buy from at least one buyer 18 and posts the offer to buy to the communications network. The host server 12 then receives at least one offer-response that is responsive to the buyer's 18 offer to buy. The host server 12

publicly posts the offers to buy and the offer-responses to the communications network to facilitate competitive bidding between sellers. Preferably the host server is a web-based server that posts a conventional web page for displaying the offers to buy, and the offer-responses.

The system 10 includes the database 14 stored on the host server 12 to store user ID's, pass codes and data associated with each user. The database 14 enables the host 12 to verify user ID's and pass codes of buyers and sellers.

User registration is a prerequisite to posting offers to buy and offer-responses on the host 12. The host verifies user ID's and pass-codes, permitting only registered users to post offers and offer-responses.

The system 10 enables anonymous communication between users. The user ID's employed by the host 12 and stored on the database typically do not include user data. Anonymous communication is accomplished by using the user ID's for posting offers and offer-responses. It can be appreciated that while the system 10 operates to preserve user anonymity, a user may optionally waive anonymity by sharing his/her e-mail address or other contact information with other users. Accordingly, the user e-mail address, name and other contact information are confidentially stored on the host server 12 via the database 14 and are not shared by the host server 12.

E-mail communications between users are routed through the system 10 via the host server 12 and the e-mail server 16. According to one aspect of the invention, the e-mail server 16 communicates with the host server 16 and user database 14 for facilitating anonymous communication between a buyer 18 and a seller 20.

The e-mail server 16 accesses the database 14 to verify user ID's and to associate an e-mail address with each user ID. The e-mail server 16 routs e-mails between users using the user Ids. The e-mail server 16 has an e-mail address filter for removing e-mail addresses from routed e-mail correspondences. Accordingly, the e-mail server functions as an anonymous e-mail forwarder.

Anonymous e-mail forwarding prevents systematic disclosure of buyer contact information, including buyer e-mail address. Buyer anonymity is strongly desired to prevent overzealous sellers from spamming curious buyers. The concept of combining an

anonymous e-mail forwarder in combination with a system for selling items is one of the novel features of the present invention.

The hardware configuration of a host server and an e-mail server results in the host server receiving communications (e.g. e-mail) initiated by users viewing web pages page hosted by the host server. Such communications are verified and forwarded via the e-mail server as appropriate. It can be appreciated, however, that the hardware configuration can be combined into a single machine, or into multiple machines.

E-mail is defined broadly to include all electronic communications regardless of format. For example, e-mail can include sound attachments, video attachments, and even sound and video streams with compression. A user ID may be a digitally signed ID. The user's e-mail address is a generic term that is understood to include any electronic address.

A buyer does not always have sufficient information to accept or reject an offer-response. Accordingly, the present invention provides for two easy ways to anonymously enable the buyer to query the seller. One way is by anonymous e-mail. Another way is by anonymous chat.

Offers to buy and offer-responses are posted on the host with user ID's. According to one aspect of the invention, the e-mail server 16 is capable of receiving a query-response from the seller. Upon receipt of a query-response, the e-mail server 16 accesses the database 14 to associate the query-response with a buyer 18 and then forwards the query-response to the associated buyer 18.

Preferably, the e-mail server 16 includes an offensive term filter to prevent the e-mail server 16 from forwarding e-mail with offensive terms. The host server 12 includes an offensive term filter to prevent the host server 12 from posting offensive terms in the offers to buy and the offer-responses.

FIG. 2 shows the method 24 employed by the system of FIG. 1. The method 24 includes the step 26 of posting an offer to buy on the host server, the step 28 of accessing the offer to buy, the step 30 of posting an offer-response on the host, the step 32 of anonymously querying the seller for information pertaining to the offer-response, the step 34 of receiving a query-response and the step 36 of forwarding the query-response to a

buyer.

In the step 28, a seller 20 accesses the offer to buy and evaluates his ability to satisfy the buyer 18. In the step 30, the seller 20 posts an offer-response corresponding to the offer to buy on the host server. In the step 32, the buyer anonymously queries the seller for information pertaining to the seller's offer-response. The query is typically via e-mail. The seller responses to the query in the form a query-response addressed to the buyer's user ID. In step 34, the server receives the query response from the seller. The e-mail server identifies the buyer user ID from the query response. The e-mail server associates the user ID with a buyer e-mail address. In step 36, the e-mail server forwards the query-response to the buyer, or provides notification to the buyer that the query-response has been received.

It can be appreciated that although e-mail is preferred, when e-mail is not available snail mail, fax, or other means may be employed to communicate the query response to the buyer.

FIG. 3 shows a system with multiple sellers for a reverse auction. The 40 includes a first seller 42, a second seller 44 and an n^{th} seller 46. The first seller 42, the second seller 44 and the n^{th} seller 46 each respond an offer to buy initiated by the buyer 18. Accordingly, when the buyer posts an offer to buy to the communications network via the host server 12, the server 12 enables sellers to view the offer to buy. The host server 12 enables the sellers 42, 44 and to post offer-responses to the server 12, where the posted offer-responses are posted to the network.

According to one aspect of the invention, the host server 12 limits each seller to one offer-response. According to another aspect of the invention, the host 12 permits a seller to post multiple offer-responses. Multiple offer-responses by the same seller is desirable when, for example, the seller is a car dealer and has many cars that fall within the scope of the buyer's offer to buy.

The offer-responses posted by the sellers 42, 44 and 46 to the network via the host server 12 are viewable by each of the multiple sellers 42, 44 and 46, the buyer 18 and by other network users.

Offer-responses are modifiable. Modifying offer-responses enables sellers to

increase quantities and decrease prices. Preferably, the server 12 disables the seller's ability to decrease quantity and increase price. This aspect of the invention better assures that prices decline during the reverse auctions. The host server 12 is optimized to virtually instantaneously post offer and offer-response modifications to the network. Instantaneously posting offer-response facilitates competition between sellers. According to one aspect of the invention, sellers 42, 44 and 46 are automatically notified when any offer-response is added or modified so that a reverse auction rapidly evolves.

FIG. 4 shows a method 50 employed by the system of FIG. 3. The method includes the steps of method 24 (FIG. 2) and the step 52 of deciding whether a response is satisfactory and the step 54 of modifying the offer response. The step 56 includes the buyer accessing the multiple offer-responses 30.

In step 58 the seller blindly responds to the buyer's query with a query-response and the buyer receives the seller's query-response (step 34 of FIG. 2). The buyer evaluates the offer-responses and the query responses to complete the step 60 of consummating a transaction with one or more of the sellers.

A buyer posts an offer to buy on the host server in step 26. This offer to buy is posted on a web page and is accessed by three sellers in steps 28a, 28b and 28c. Each seller posts an offer-response to the network via the server hosted web page in steps 30a, 30b, and 30c. Each seller checks the web page to view competing offers and determines if his offer-response is satisfactory in steps 52a, 52b and 52c. If the seller's offer-response is unsatisfactory, e.g. does not result in consummation of a transaction, then seller may choose to modify his/her offer-response 54a, 54b, and 54c. The buyer accesses the multiple offer-responses, step 56. In step 60, the buyer consummates a transaction with one or more of the sellers in step 60. Alternatively, in steps 32a and 32b, the buyer may anonymously query any of the sellers.

There are instances where the buyer may not have enough information to decide whether or not to consummate a transaction, step 60. Accordingly, the buyer anonymously queries the first and second seller 32a and 32b. Each seller blindly (i.e. without knowing the buyer email address or contact information) responds to the buyer's

query 58a and 58b. The seller responses are communicated via e-mail according to one aspect of the invention.

According to an alternate aspect of the invention, the buyer's queries and the seller's responses are posted to the network via the host server web page.

Whether the queries, and responses are delivered via the web page, or e-mail, the buyer will ideally have sufficient information to consummate a transaction, step 60. A transaction may be consummated with any one, or more, of the sellers. Optionally, the buyer may opt out of any further communication with the sellers. It can be appreciated that the buyer remains anonymous to each of the sellers, unless the buyer decides to consummate a transaction, step 60. In step 60, the seller typically needs buyer payment information and shipping address.

FIG. 4(a) shows the buyer offer interface posted by the host server. The buyer offer interface includes a listing form 61 for posting offers to buy on the host server. The listing form includes a pricing criteria toggle 62 having at least three offer pricing criteria options, including a first option 64 for accepting all offers; a second option 66 for allowing all offers below a certain value; and a third option 68 for allowing only the lowest offer. The toggle 62 enables a buyer to instruct the host server to selectively filter offer-responses based on desired pricing criteria. When the host receives offer-responses that meet the price criteria from the listing form 61, the host server posts the filtered offer-responses to the network.

FIG. 5 shows a system 70 including the host server 12, the database 14, the e-mail server 16, the buyer 18, the seller 20 and a negotiation room server 70. The negotiation room server 70 is in communication with the host server 12 for enabling anonymous on-line chat between the buyer 18 and the seller 20.

Preferably the host server 12 posts a web page interface with a negotiation room toggle. The buyer actuates the toggle to cause the e-mail server to dispatch an instant notification to the seller to indicate that a chat is requested. The negotiation room server simultaneously displays a negotiation interface that is simultaneously accessible by the buyer 18 and the seller 20. The negotiation interface enables buyers to anonymously post queries relating to a particular auctioned items and enables sellers to post query-

responses.

If the seller 20 does not respond, the e-mail server sends an e-mail notification to the buyer 18 indicating that an appointment to chat should be set. The buyer 18 dispatches an anonymous appointment invitation via the negotiation room server 72 and the e-mail server 16 to the seller 20 to make an appointment to chat. The appointment invitation specifies a suggested appointment time.

Preferably, the negotiation room interface is simultaneously accessible by a single buyer and a single seller for real-time communications. The negotiation room server 72 has an identity filter so that the buyer's identity remains anonymous when the buyer 18 uses the negotiation room interface.

The negotiation room server 72 includes an offensive term filter to prevent the negotiation room interface from posting offensive terms. The offensive term filter operates in real time to monitor and filter chat between a buyer and seller. This filter identifies and eliminates offensive terms used during the chat and drops (prevents further use by) buyers and sellers that use offensive terms.

In Operation

The system of the present invention operates a reverse auction having an open back end that reveals buyer offers, and seller offer-responses. Revealing the seller offer-responses to other sellers facilitates competition between sellers. No other on-line system permits reverse auctions with an open back end. The system also preserves buyer anonymity until a transaction is consummated.

The system includes a host server having a web-based interface in communication with the communications network. The host server receives and posts offers to buy from buyers and offer-responses from sellers via the web-based interface. Each offer-response is responsive to an offer to buy.

The host server posts the offers to buy and the offer-responses to the communications network. A user database stored on the host server stores user ID's and user contact information.

The user contact information typically includes an e-mail address. An anonymous e-mail server communicates with the host server and the user database. The e-mail server

receives queries form buyers and query-responses from sellers. The e-mail server includes an e-mail address filter. E-mails form buyers typically include the buyer's e-mail address. Upon receipt of an e-mail query from the buyer, the e-mail server filters any e-mail address information form the query before forwarding the query to the seller.

The host server is simultaneously accessible by multiple sellers to enable multiple sellers to post multiple offer-responses and to enable multiple sellers to simultaneously review the multiple offer-responses. The host server enables modification of each offer-response to encourage sellers to bid down against each other. The host server is optimized to virtually instantaneously post the modifications, thus creating a real time reverse auction between buyers and sellers.

While the foregoing detailed description has described various embodiments of the invention it is to be understood that the above description is illustrative only and not limiting of the disclosed invention. Multiple systems can screen communications in accordance with the present invention. Host servers can function both as e-mail servers and chat servers. Accordingly, the present invention is not limited to a multi-machine system. The present invention can be implemented with a single host machine that provides multiple functions. Accordingly, the invention is to be limited only by the appended claims.

CLAIMS

What is claimed is:

1. A system for operating a reverse auction on a communications network, comprising:

a communications network accessible by buyers and sellers;

a host server in electronic communication with the communications network;

the host server hosts a web site for posting offers to buy items and for posting offer-responses to the communications network;

the host server receives offers to buy and posts the offers to buy items to the network;

the host server receives offer-responses that are responsive to the offers to buy items, the host server posts the offer-responses to the communications network,

whereby, the posted offers and posted offer-responses are viewable by network users to facilitate competition.

2. A system for operating a reverse auction as set forth in claim 1 further comprising a user database stored on the host server to store user contact information, the user contact information including a user e-mail address associated with each user; and

an e-mail server in electronic communication with the host server and user database, the e-mail server being capable of receiving a query from a buyer and anonymously forwarding the query to a seller, and for receiving a query-response from the seller and for forwarding the query-response to the buyer.

3. A system for operating a reverse auction as set forth in claim 1 further comprising a negotiation room server in communication with the host server for enabling anonymous on-line chat between the buyer and the seller.

4. A system for operating a reverse auction as set forth in claim 1, wherein the communications network is the Internet.

5. A system for operating a reverse auction as set forth in claim 1, wherein the server enables modification of offer-responses to facilitate price competition between sellers.

6. A system for preserving user anonymity during on-line transactions, comprising:

a communications network accessible by buyers and sellers;

a host server in electronic communication with the communications network, the host server receives and posts offers to buy from buyers and offer-responses from sellers, each offer-response being responsive to an offer to buy, the host server posts the offers to buy and offer-responses to the communications network;

a user database stored on the host server to store user contact information, the user contact information including a user e-mail address associated with each user; and

an e-mail server in electronic communication with the host server and user database, the e-mail server being capable of receiving a query from a buyer and anonymously forwarding the query to a seller, the e-mail server being capable of receiving a query-response from the seller and for forwarding the query-response to the buyer.

7. A system as set forth in claim 6, wherein the e-mail server includes an e-mail address filter for filtering buyer e-mail addresses to preserve buyer anonymity.

8. A system as set forth in claim 6, wherein the host server posts offer-responses to the network and enables access to the posted offer-responses by all users to facilitate competition between sellers.

9. A system for operating a reverse auction as set forth in claim 6 further comprising a negotiation room server in communication with the host server for enabling anonymous on-line chat between the buyer and the seller.

10. A method for operating a reverse auction on a communications network, comprising:

posting an offer to buy to a communications network from at least one buyer;

posting offer-responses to the communications network from at least one seller, the offer-responses being responsive to the offer to buy; and

consummating a transaction.

11. A method as set forth in claim 10 further comprising enabling the buyer to anonymously query one of the sellers for information pertaining to one of the offer-responses.

12. A method as set forth in claim 11 further comprising enabling the buyer to anonymously query one of the sellers via e-mail for information pertaining to one of the offer-responses.

13. A method as set forth in claim 11 further comprising enabling the buyer to anonymously query one of the sellers via on-line chat for information pertaining to one of the offer-responses.

14. A method as set forth in claim 10 further comprising modifying an offer-response to enable competitive bidding between posted offer-responses.

15. A method as set forth in claim 10 further comprising dispatching a notification when an offer-response is received.

16. A method as set forth in claim 14 further comprising dispatching a notification when an offer-response is modified.

17. A method as set forth in claim 10 further comprising dispatching an e-mail notification when an offer-response is received.

18. A method as set forth in claim 10 further comprising communicating an invitation to chat to a seller in response to a particular posted response.

19. A method as set forth in claim 10 further comprising initiating chat on a negotiation room server.

20. A method as set forth in claim 10 further comprising consummating a transaction.

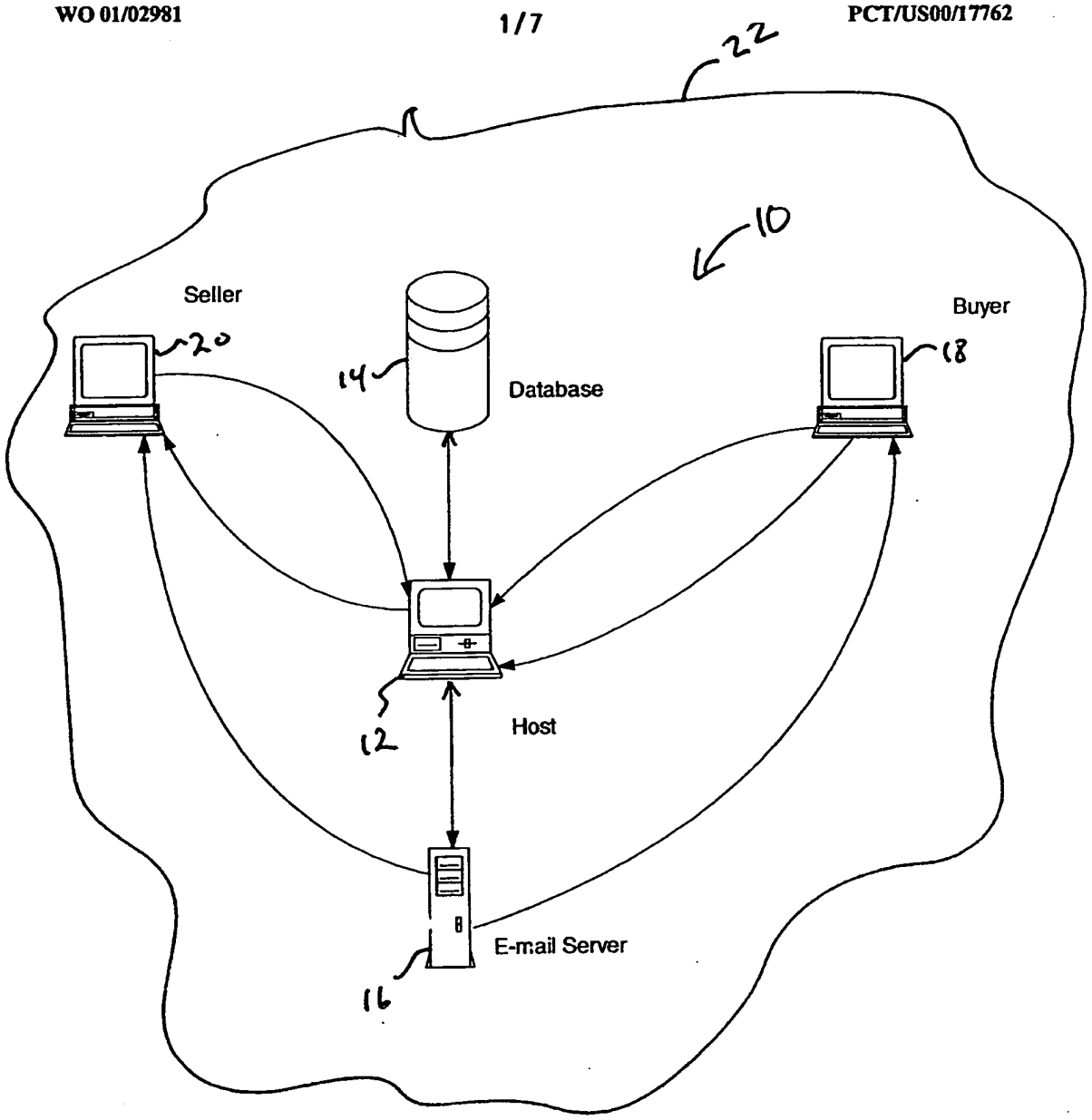

FIG. 1

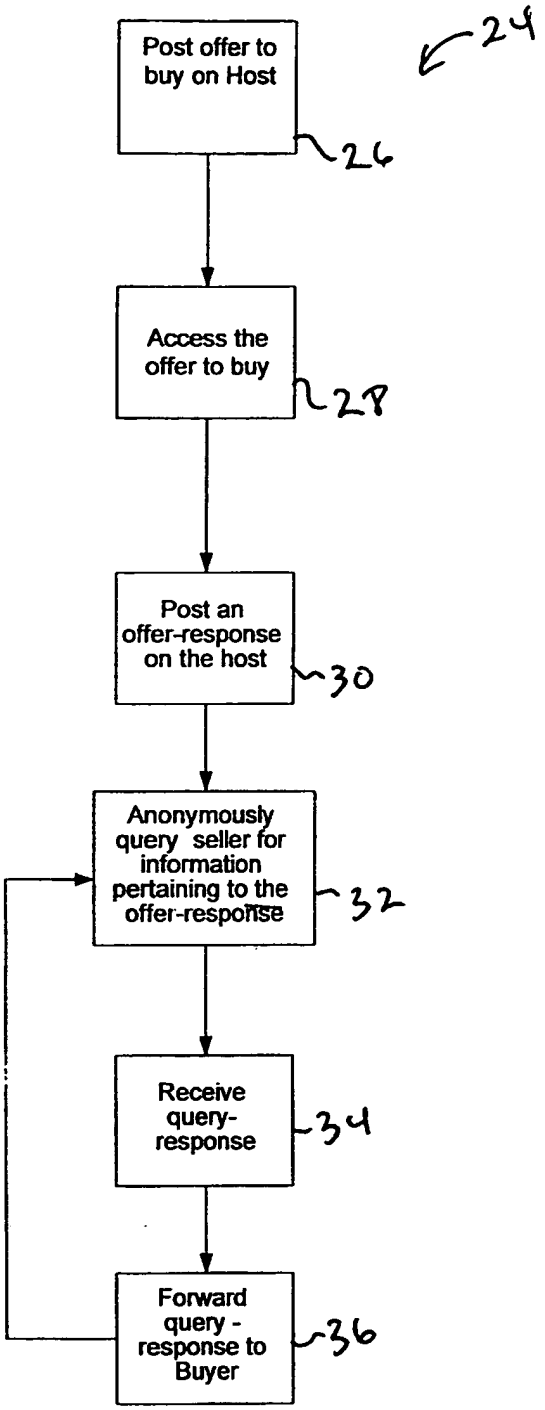
Post offer to buy on Host
24
26
Access the offer to buy
28
Post an offer-response on the host
30
Anonymously query seller for information pertaining to the offer-response
32
Receive query-response
34
Forward query - response to Buyer
36

FIG. 2

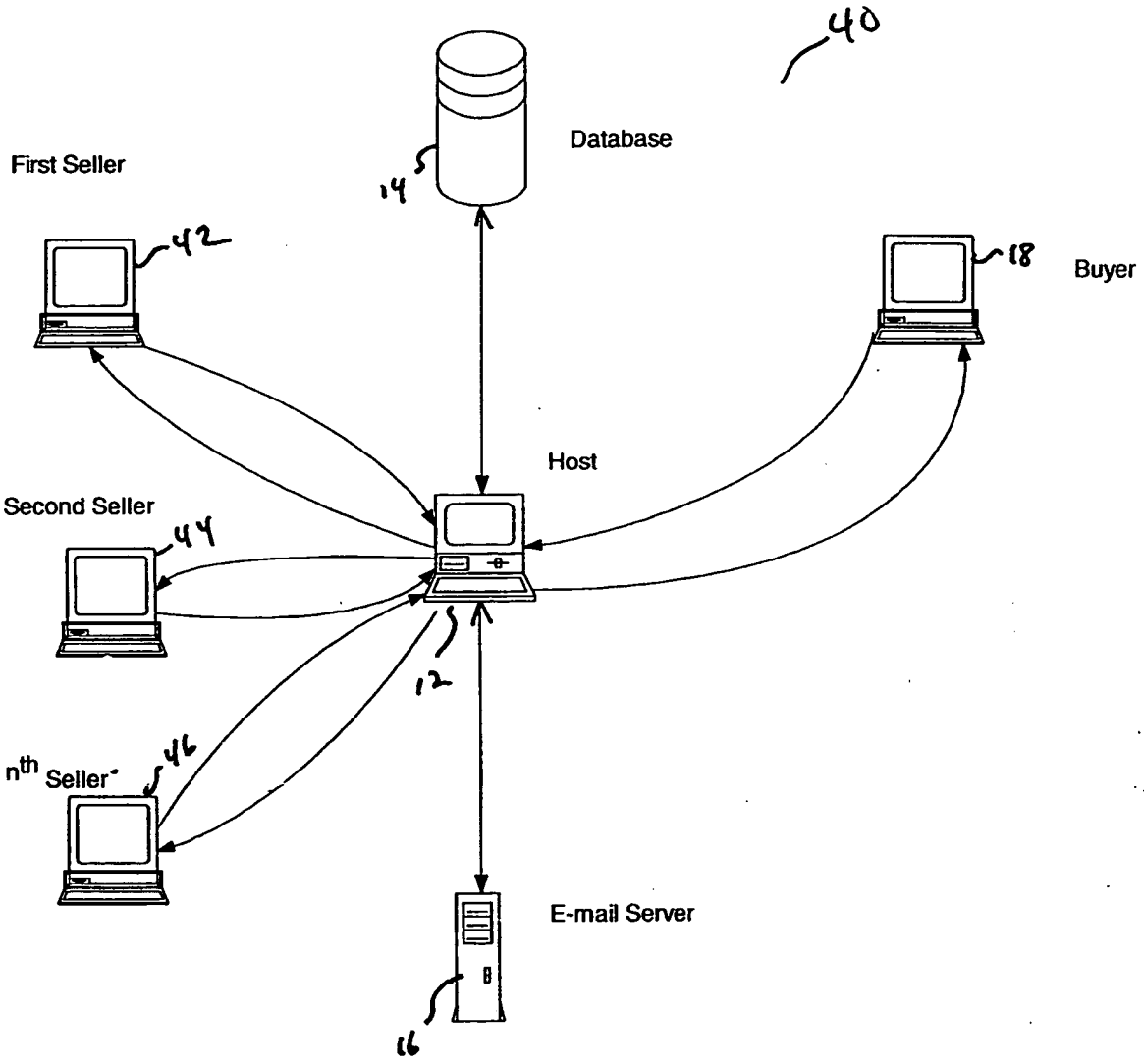
40
Database
14
First Seller
42
18
Buyer
Host
Second Seller
44
12
nth Seller
46
E-mail Server
16

FIG. 3

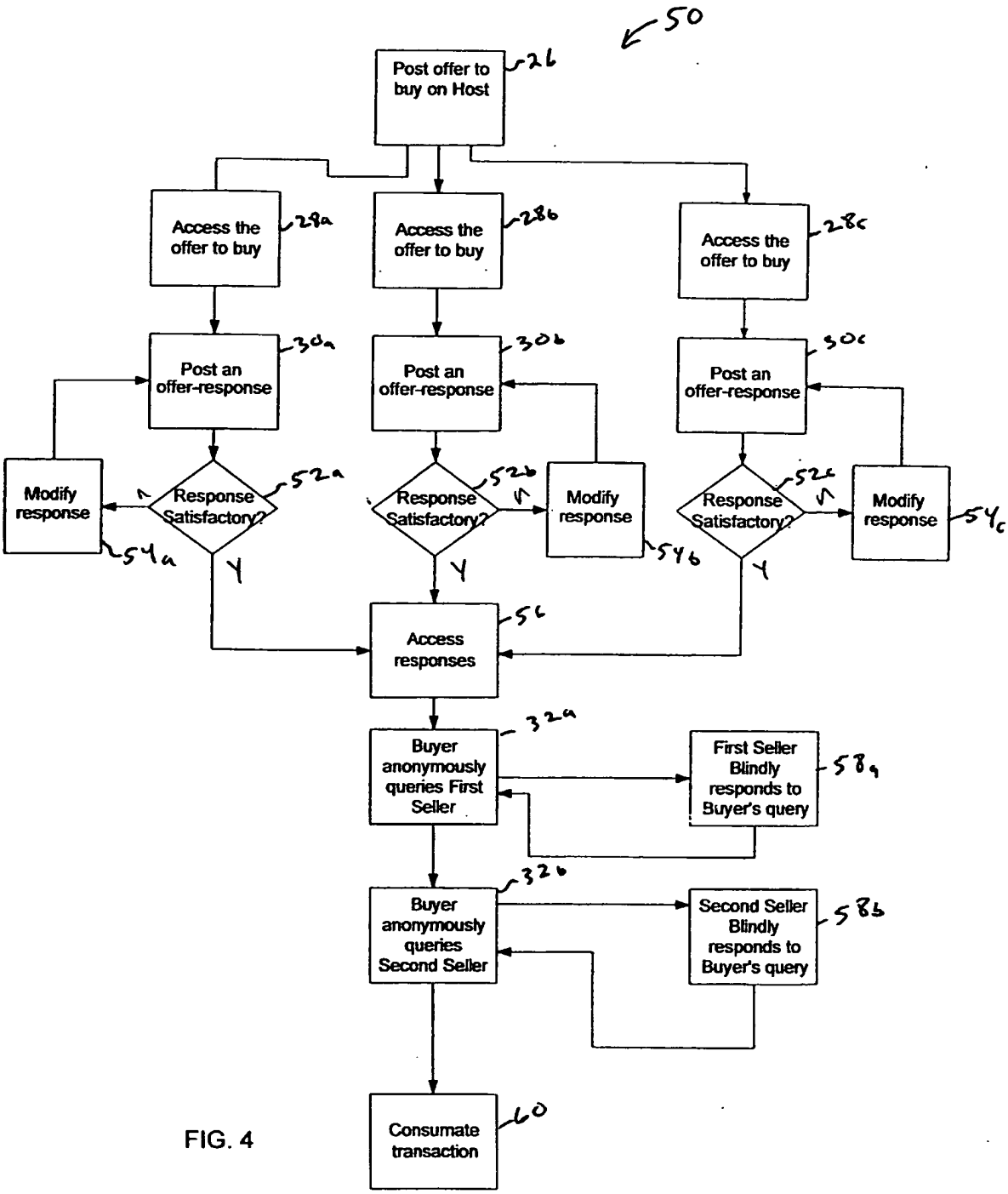
50
Post offer to buy on Host
26
Access the offer to buy
28a
Access the offer to buy
28b
Access the offer to buy
28c
Post an offer-response
30a
Post an offer-response
30b
Post an offer-response
30c
Modify response
Response Satisfactory?
52a
Response Satisfactory?
52b
Modify response
Response Satisfactory?
52c
Modify response
54c
54a
54b
Y
Y
Y
Access responses
56
Buyer anonymously queries First Seller
32a
First Seller Blindly responds to Buyer's query
58a
Buyer anonymously queries Second Seller
32b
Second Seller Blindly responds to Buyer's query
58b
Consumate transaction
60

FIG. 4

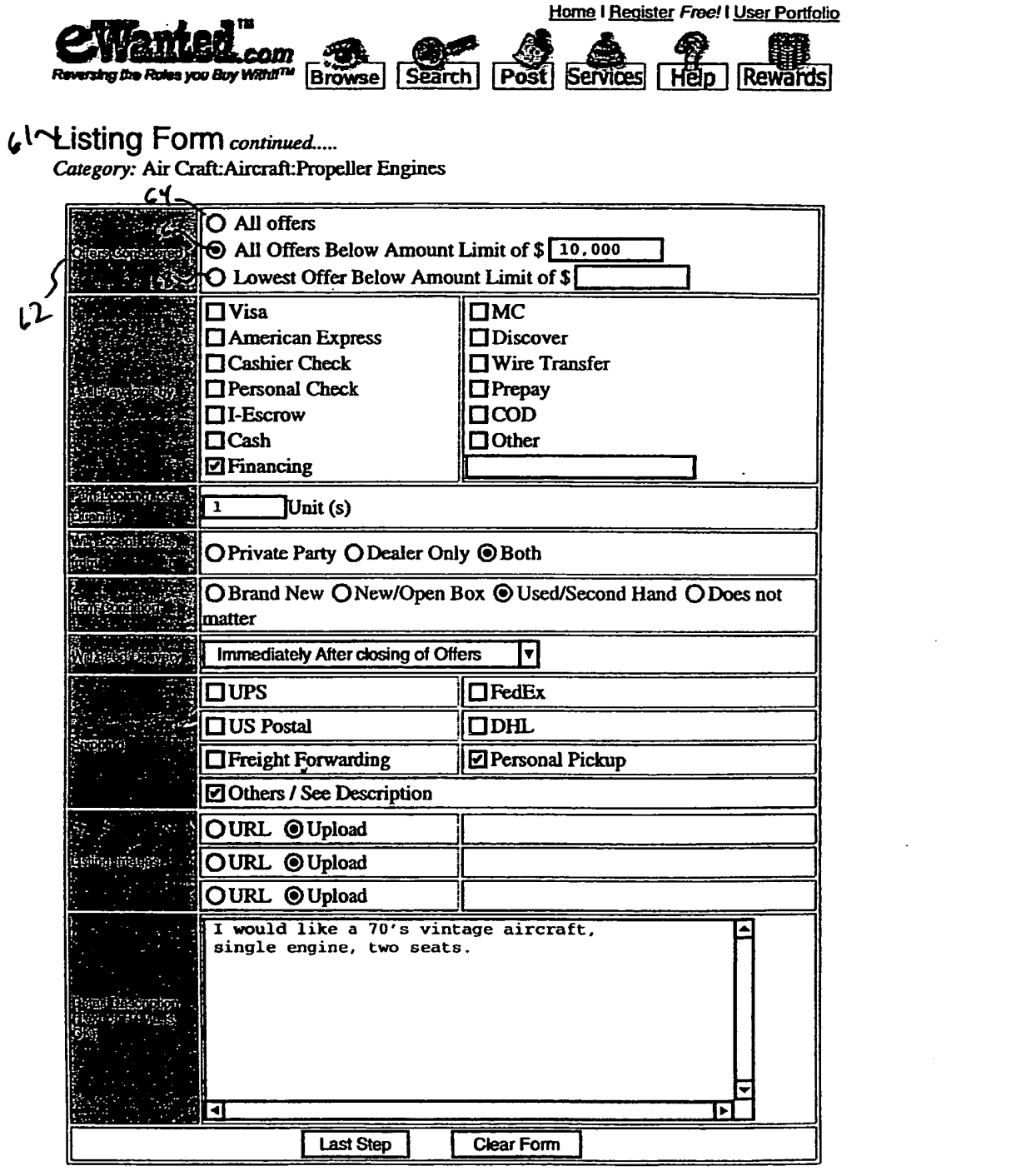

FIG. 4(a)

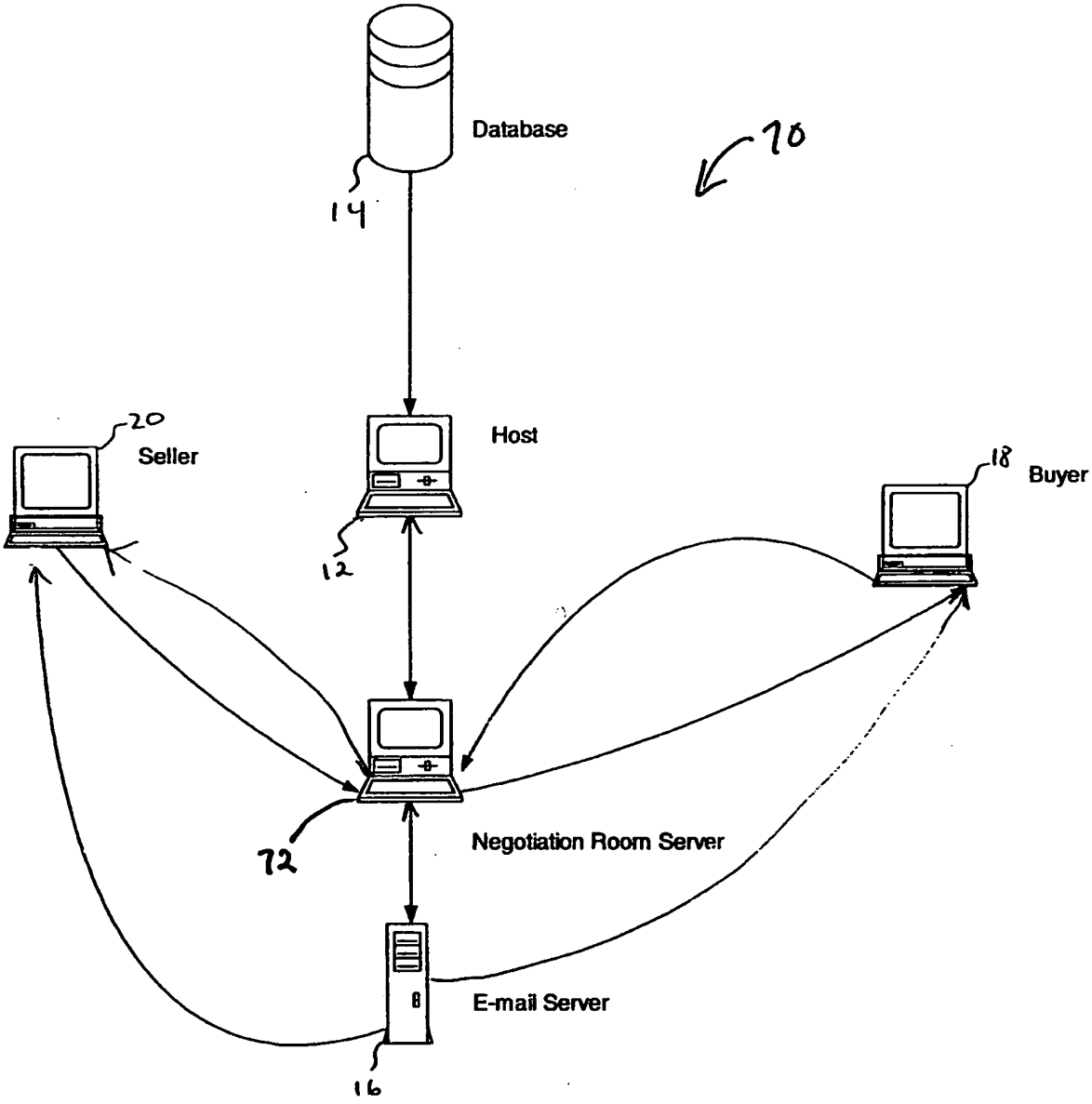
Database
14
70
20
Seller
Host
12
18
Buyer
72
Negotiation Room Server
E-mail Server
16

FIG. 5

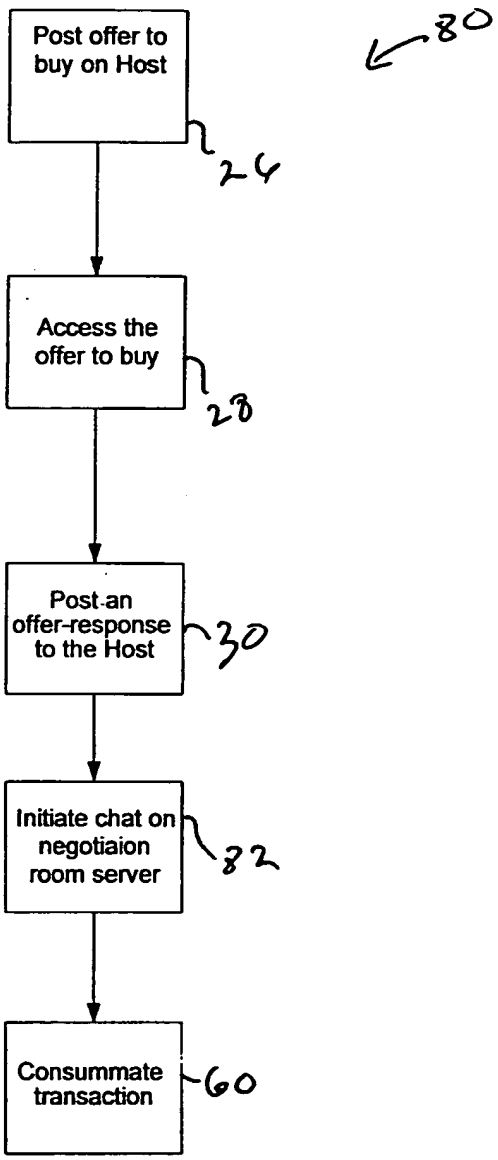
Post offer to buy on Host
24
80
Access the offer to buy
28
Post an offer-response to the Host
30
Initiate chat on negotiaion room server
82
Consummate transaction
60

FIG. 6